A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, \$\$)	H. Additional Information
11 South Carolina State Measures	is without including measures beyond national and regional measures already finalized 2012 and 2017 also shows attainn	nent. Our continuing EAC programs are also related to	maintanana	1			
<u> </u>		ient. Our continuing EAC programs are also related to	maintenance.				
• • • • • • • • • • • • • • • • • • • •	e of nonattainment designation deferred) Spartanburg County						1
School Bus Retrofit Project	Approximately 20 diesel buses will be retrofitted particulate filters during 2006. (additional reductions of PM are also expeted)		2006	340 lbs/year	N/A	N/A	CO reductions 2,380 lbs/year December 2004 EAC SIP - Appendix 16
	SPARTANBURG COUNTY, SC DECEM and taking into consideration resource and political constraints, the following control se measures under consideration will assist the County of Anderson, Greenville, Sparta	measures are under consideration per	-			-	SCDHEC. It is anticipate
Air Quality Awareness and Improvement Policy	Memorandum sent to all County department head as well as elected and appointed officials for the purpose of establishing certain principles that will guide the recurring activities of County government. Effective immediately: 1. Encourage that all county employees are notified of upcoming Ozone Action Days. 2. Encourage car-pooling opportunities. 3. Ensure that all County vehicles and equipment are operating according to the manufacturer's specifications. 4. Restrict vehicle idling to no more than 5 minutes. Exceptions include emergency vehicles, trafic/weather conditions and vehicles being repaired, maintained, or inspected. 5. Restrict mowing and use of gas powered lawn equipment on County property on Ozone Action Days. 6. Restrict all outdoor burning on Ozone Action Days. 7. Energy energy conservation in all County facilities. 8. Include environmental considerations in purchasing decisions for goods and services. An example of such would be to purchase Energy Star equipment. SEE Comment #6	Policy remains in effect.	Effective immediately - October 6, 2004	directionally sound	directionally sound	N/A	The commitment to address the activities has been assured by the County Administrator by establishing the Air Quality Awareness and Improvement Policy for County Government. 1. See comment
Support SCDHEC statewide efforts to reduce ozone levels.	Stakeholder group to support and participate in modeling efforts. Develop stakeholder group to participate in development of regulations (NOx - BACT (Best Available Control Technology Economically Achievable), restrict open burning). • Members of the Upstate Air Quality Staff Advisory Committee participated WITH dhec in the development of new regulations aimed at reducing NOx emissions. As a result, new regulations requiring Nox-BACT (Best Available Control Technology Economically Achievable) were adopted in mid 2004.	December 2004 EAC SIP did include Appendix 16-1. SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year-reductions expected during the ozone season for residential construction waste 2. SC61-62.5, Std. 5.2 "Control ofOxides of Nitrogen) reduction amount for both existing and new sources combined across Anderson, Greenville, Spartanburg for 2007 calendar year 3. June 24, 2004 - Participated in Upstate Air Quality Steering Committee meeting held at BMW. See Comment #4. November 2004 - Greenville County submitted letter supporting SIP. See Comment #5. Greenville County implemented the following measures during 2004 and 2005: purchased alternate fuel vehicles (Greenville purchased 19 such vehicles since November 2004); published and distributed brochures about improving air quality; sent out notices on high ozone days and developed audio commercials for local radio stations to broadcast during ozone awareness week and ozone season; broadcasted radio announcements and information through the County's Cable TV channel,	2004	43.01 tons/season N/A	9.06 tons/season 234.1 tons/yr		Upstate Air Quality Staff Advisory committee will be developing a business partnership plan to involve local industries in announcing ozone alerts, participating in ride share programs and adopting the same or similar list of initiatives that Greenville County adopted from the SELC.
2. Designate an Ozone Action Coordinator	Designate a staff person in each County who will be responsible for coordination of counties ozone programs	Spartanburg County Council appointed one Ozone Action Coordinator in March of 2003: Jim D'Amato. Jim D'Amato continues to serve as the Ozone Action Coordinator.	March 2003	N/A	N/A	N/A	See Comment #5
3. Seek low sulfur fuels as early as possible	Continue to coordinate with representatives of colonial and Plantation pipelines, refiners, and State representatives to ensure that the upstate has the opportunity to receive low sulfur fuels at the earliest date as they can be provided.	Committee continues to coordinate with representatives of Colonial and Plantation pipelines, refiners. See Comment #5. During 2005, Colonial Pipeline conducted studies that indicates that S.C., as well as others along the Colonial Pipeline are receiving sulfur levels that should help many of the non-attainment areas. Specifically: M and V are the grades used in South Carolina. The sulfur content averages shown below are by batch not volumetric weighted values. • M Grades: Average 139 High 300 · The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Little Journal of the control of the	-	directionally sound	directionally sound	N/A	

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Design and implement congestion managemen and Intelligent Transportation System (ITS) measures.	It Implement congestion management projects: intersection and signalization improvements to alleviate traffic congestion, therefore, reducing emissions from idling vehicles, implement Intelligent Traffic Systems such as automated advisory/alert messages to drivers on interstate highways. For example: advise motorist about an accident ahead and the use of alternate routes to avid congestion, which minimize emissions from idle vehicles. Encourage and support improved traffic operational planning, engineering and maintenance for existing and future transportation infrastructure.	Cameras and variable message boards have been installed on I-26 in Spartanburg County, I-385 in Greenville County, and along I-85 through Anderson, Greenville and Spartanburg counties. Spartanburg County is working to implement the design for a complete and coordinated signal system within the City of Spartanburg and its immediate urban environs. This includes utilizing new fiber optic cables, new signal heads, and a new computer system controlled by the city. The cost of this effort is over \$5 million, and when complete will fully coordinate approximately 100 signals. Once this effort is complete, traffic flow within the urban area of Spartanburg County will be much improved, and congestion leading to ozone emissions will, hopefully, be reduced. *The SCDOT is currently doing preliminary engineering on a SPATS-funded project to coordinate traffic signals along the busy SC 9 corridor in Boilling Springs. The design of the system is currently funded in the amount of \$110,000 by the SPATS MPO, and when construction is complete, signals along SC 9 will be on the construction is complete, signals along SC 9 will be on the system is currently funded in the amount of \$110,000 by the SPATS MPO, and when	Initiated in 2005 and continuing.	directionally sound	directionally sound	N/A	Information about SPATS programs are available at www.spartanburgcounty.org
5. Use of hybrid vehicles	Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel). Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract.	There are approximately 70 alternative fuel vehicles operating within federal, state, county and municipal government. Of that amount 16 belong to the county. As directed by the County Administrator all future purchases will be either Hybrids or Alternative Fuel Vehicles, if practicable - Spartanburg County is currently performing a cost-benefit analysis for the purpose of ascertaining whether new vehicle purchases should include hybrids. The county has already begun to implement a program to purchase flexible fuel vehicles for its fleet. On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. The ratified title is AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING SECTION 126-33377 SO AS TO ALLOW A STATE INCOME TAX CREDIT EQUAL TO TWENTY PERCENT OF CERTAIN NEW HYBRID, FUEL CELL, ALTERNATIVE FUEL, OR LEAN BURN TECHNOLOGY MOTOR VEHICLE CREDITS ALLOWED AGAINST A TAXPAYER'S FEDERAL INCOME TAX LIABILITY.	Completed in 2005 and continuing.	directionally sound	directionally sound	N/A	
6. Use higher efficiency engines for school buses	Require purchase of high efficiency engines for school buses as they are replaced. In South Carolina, the SC Department of Education is in charge of maintenance of school buses. DHEC is working with SC Department of Education to obtain grants from EPA. Promote an Adopt-A-School-Bus Program. Endorse a statewide recommendation for the State to take the lead	School Bus Retrofit Project: approximately 20 diesel buses will be retrofitted particulate filters during 2006. (additional reductions of PM are also expected) The school buses may not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available since the retrofitting technology being applied works best with this new fuel type. The South Carolina Department of Education purchased 61 new buses that should be on the road in late 2005. The Department of Education has been awarded a Clean School Bus USA Grant for \$499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot. State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly \$36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels. The buses from these funding sources will be distri		directionally sound	directionally sound	N/A	Reductinos accounted for under School Bus Retrofit Project

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	WALKING/BIKING Biking and pedestrian pathways are being added to all new SPATS widening projects. SC 295 Phase 2 will include ar offset shared use path along most of the length of the road improvement. In addition, the upcoming widening of SC 9 will include both bike and pedestrian facilities, where appropriate.			directionally sound	directionally sound	N/A	Information about SPATS programs are available at www.spartanburgcounty.org
	MASS TRANSIT: Staff will work with SPARTA to disuss implementing a program to offer free or reduced fares on ozone action days.	A staff person from the South Carolina Department of Transportation (SCDOT) has been designated to receive SCDHEC's Ground-level Ozone Forecast and to distribute it via email to approximately 5,000	in 2005 and is continuing. Completion of this measure dependent upon SPARTA financial status.	directionally sound	directionally sound	N/A	
7.c. Reduce vehicle miles traveled by developing efficient user-friendly transit systems.	Integrate transportation planning with land use planning so public transit can make a comprehensive contribution to economic development and mobility; Remove local barriers to densification in downtowns, infill areas, and transit stations and corridors.	http://www.spartanburgcounty.org/govt/depts/pln/spats/docs/excsum.pdf . The Plan includes a Bicycle and Pedestrian Plan as well as an Alternate Mobility Master Plan.	in 2005 and is continuing. Completion of this task dependent upon elected	directionally sound	directionally sound	N/A	Comments #7
Review and update air emission inventory for the Upstate	Ensure all industrial sources still operating. Review industrial sources for plant closures. Identify major sources of NOx Map the locations of point sources (10% of point sources cannot be found). Map the specific locations and the area sources where coal is burned.		information was	directionally sound	directionally sound	N/A	SCDHEC

A.	В.	C.	D.	E.	F.	G.	Н.
Control Measure under Consideration	Summary Description of Measure	Program/Measure Status	Specific Implementation Date	VOC Reduction	NOx Reduction	Resources (FTE's, \$\$)	Additional Information
Support SCDHEC in evaluating and seeking reductions from major sources based on modeling	Support NOx reduction strategies in the State Implementation Plan Develop an Early Reduction Program with incentives for industrial facility (Tier Two Type emissions NOx sources)	See info on Duke Power included in Appendix 16 of EAC SIP (link in Comment #6). "The Williams Company has received DHEC permits to replace outdated 'uncontrolled' compressors on the pipeline located in Duncan. Replacement of the compressors will begin in late 2004 and continue until late 2005. This will result in a significant NOx reduction for the upstate. Transcontinental Gas Pipe Line Corporation (Ttransco) Station 140, Moore, SC; Operating Permit 2060-0179. Transco has 14 natural gas fired internal combustion (IC) engines that collectively accounted for 3,822 tons of ozone season NOx emissions during 1997. Transco has submitted a construction permit application to put on NOx controls that will result only 1,261 tons of ozone season NOx emissions. The permit was approved on April 27, 2004. The Williams Company received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors began in late 2004 and continue until late 2005. This will result in a significant NOx reduction for the Upstate. NOx reduction at the Duke Power Lee Steam Plant Local fixed Linit #2 is now operation, with the new NOx reduction at the compressors with the new Nox reduction at the Duke Power Lee Steam Plant Local fixed Linit #2 is now operation with the new Nox reduction at the compressors with the new Nox reduction of the Duke Power Lee Steam Plant Local fixed Linit #2 is now operation with the new Nox reduction of the Power Lee Steam Plant Local fixed Linit #2 is now operation with the new Nox reduction of the Power Lee Steam Plant Local fixed Linit #2 is now operation with	in 2004 and was completed in 2006.	N/A	40%	N/A	
 Develop a program to offer to purchase or repair smoking vehicles (known as cash for clunkers). 	Use funds generated from a license plate sales, registration fees, or license plate tax program to buy or repair high emitting vehicles from individuals. Purchase such vehicles from non-profit groups such as the Kidney Foundation, Goodwill, Salvation Army when they have been donated as charitable gifts. Consider accelerated vehicle retirement (scrappage) programs to encourage vehicle owners to voluntarily retire their vehicles sooner than they would have otherwise.	staff from the Air Quality Staff Advisory Committee will meet with Goodwill Industries, Salvation Army and Kidney Foundation representatives to discuss alternatives to re-selling clunker vehicles donated to these organizations.	Completed in 2006. No action taken due to budget constraints.	directionally sound	directionally sound	Use funds from license plate sales	
Ban open burning of on-site commercial clearing debris during ozone season (April - October)	Use SCDHEC model to detrmine the most effective method to ban open burning. Discuss modeling results with all local governments to consider adoption.	DHEC adopted regulations in mid 2004 restricting open burning. See Comment #6. DHEC encourages Anderson, Greenville, and Spartanburg to actively notify all residents that the statewide ban is now in force and violations are punishbile by law. At the November 2005 Air Quality Steering Committee meeting, the Committee directed staff to coordinate with local governments to enforce DHEC's burning ban year-round. Staff will schedule meetings with Administration and pertinent departments to discuss this measure, and how Spartanburg County and help to implement it.	Completed on June 25, 2004 with the passage of regulation SC 61-62.2 "Prohibition of Open Burning" and continuing.	directionally sound	directionally sound	N/A	See Comment #6
Create incentives for the purchase of high efficiency and low emissions vehicles.	Offer tax credits for vehicles with high efficiency gas consumption or low emissions. Offer tax credits for low mileage vehicles instead of high mileage vehicles	Developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles. A bill titled "An act concerning the promotion of alternative use fuel, and hybrid propulsion system for transportation purposes" was submitted to the SC House of Representatives in January 2005. The bill is now in committee. In summary, the bill provides tax Credit for vehicles using alternative fuel or hybrid propulsion vehicles. The credit is allowed against the tax imposed by for the purchase of vehicles licensed in South Carolina which use, or which are converted within 120 days of purchase to use, clean-burning fuel. Specifically the intent of the bill will apply for income tax years beginning on or after January 1, 2004, but prior to January 1, 2013. The tax credit will be allowed for the purchase of an alternative fuel or hybrid propulsion vehicle, and for a motor vehicle that is converted to use alternative fuel, for the replacement of the power source with a power source that uses alternative fuel. On June 1, 2006 the Governor signed the H*4312(in 2005 and was completed June 1, 2006.	directionally sound	directionally sound	N/A	See Comment #5

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13. Use land-use and transportation planning to improve air quality	Include air quality measures as a part of the land-use and transportation planning process.	Spartanburg County's land use efforts include strategies that are represented in the county's comprehensive plan or unified and management ordinance. Some important strategies include: Development of a comprehensive urban forestry plan to include local tree ordinances, protection policies of urban open spaces, and landscape ordinances that utilize native plants. Revisions of the county's subdivision regulations to include conservation provisions to help not only retain natural resources, but add to the value and marketability of rural residential projects. This will also maintain balance between the rural setting and future growth and development. Amending the county's subdivision regulations to promote cluster housing development in rural areas, thereby minimizing land coverage for residential use. Establishing maximum lot size (recommended ¼ acre) for cluster subdivisions of a certain size, as opposed to minimum lot size, and allocating in perpetuity through lease, trust, common ownership, etc. up to 80 percent of such subdivisions to open, agricultural, or forested use, thus retaining rural, ope		directionally sound	directionally sound	N/A	
*****Develop air quality best management practices (BMPs)_ for construction sites	Develop a generic list of BMPs Develop management practices for construction debris. Develop management practices for emissions from construction vehicles. Develop management practices for traffic controls during construction.	Spartanburg County has no zoning regulations in its non-incorporated areas, so influencing land use decisions is relatively difficult. However, the city of Spartanburg is actively attempting to increase residential development downtown, which would lead to less incoming traffic during the work week. In addition, the Spartanburg County Planning Commission staff is examining its subdivision regulations for the purpose of facilitating easier cross access between neighboring subdivisions. In addition, developers are beginning to see the interest in neo-traditional development, and some new developments are being built that incorporate several of these features.		directionally sound	directionally sound	N/A	See Comment #2
14. Implement a program to encourage use of green power.	Capture emissions from landfills to produce green power, e.g., BMW is utilizing Palmetto Landfill emissions to produce energy for its plant. Implement a Purchase Green Power program when available. Green power is electricity generated by renewable resources like solar, wind, and even decomposing garbage in selected landfills. These resources are replenished naturally and minimize harm to the environment.	BMW , located in Spartanburg County, is using Spartanburg County's Palmetto Landfill's emissions to produce energy for its plant. A Green Power station will be constructed at the Anderson Regional Landfill in 2006. Santee Cooper, through Blue Ridge Electric Cooperative, recently began offering the purchase of Green Power to Anderson, Greenerville, Oconee, Pickens and Spartanburg County residents. Residential customers who increased their purchase of Green Power by 2 blocks were offered a free energy analysis between October 1 and December 31, 2005.	Completed in 2005 and continuing.	directionally sound	directionally sound	N/A	
15. Promote route efficiency for delivery vehicles, trash collection etc.	Encourge business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets. Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage.	Delivery companies currently use GPS mapping programs to map the most cost effective route to save gasoline.	Completed. No action taken by local government. Private sector fleets already maximizing fleet movement.	directionally sound	directionally sound	N/A	See Comment #5
16. Establish a clean air partnership with business and industry.	Encourage and coordinate alternate work schedules such as staggered work hours for business, industry and local governments. Establish park and ride lots serving perimeter counties along major corridors. Make the public aware of the park-and-ride concept: media could assist in publicizing which programs are available. Encourage carpooling/vanpooling as an option where employees living in the same area argree to ride to work together rather than to drive their individualvehicle to work. Consider parking facility controls that can include employers offering a tax-free transit/vanpool benefits and which limit the amount of parking and encourage carpooling, mass transit, etc. Encourage telecommuting. Adopt a Bus Program. Develop funding to be used for matching grants fund for several EAP strategies. Develop a core competency and assisting the Upstate EAP group in writing grant proposal.	Greenville Transit Authorify and Greater Greenville Chamber of Commerce have begun joining effort to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and	Completed in 2004 and continuing.	directionally sound	directionally sound	N/A	

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	Develop an editorial board to discuss air quality issues an development of a relationship with media. Use alert messages year round, not only during ozone season; Utilize public service announement, newspapers, weather channels, and other media outlets to notify citizens of high ozone days; Utilize TV Channels to issue high ozone alerts using the craw bar at bottom of TV screens. Encourage health organizations to sponsor ozone alerts in media. Enhance ozone awareness (Outreach-communication); assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.). Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawmnowers during evenings instead of during high ozone hours, using of electric lawn mowers. Develop a license plate program to generate revenue to implement the public awareness campaign. Develop awareness program on tax savings for purchasing high efficiency vehicles.	Spartanburg County requested an Air Public Service announcement from SCDHEC. Berry Shoals Elementary School in Spartanburg County requested educational materials and held special science awards in March 2005. Distributed bookmarks to public at Spartanburg County libraries, and disseminated DHEC-supplied material in information kiosk in main Spartanburg County Administration Building. Spartanburg County plans to add \$30,000 to fund an Air Quality Coordination Effort (AQCE) in the Public Works Department. This proposal supports the County's efforts to cooperatively work with the State DHEC in the conservation and enhancement of air resources in a manner that promotes quality o life. Funding for the AQCE will permit the County to fully participate in particulate matter compliance efforts including the Early Action Ozone Compliance Compact. This project will be supported with fund balance for FY07, and supported as part of the operating budget in future years.		directionally sound	directionally sound	N/A	
		o Spartanburg received a \$47,650 grant from the state Department of Health and Environmental Control to promote its recycling program. The campaign will use newspaper, radio, internet, cable television, and outdoor advertising to promote recycling. Promotions will point out that all city residents have to do to participate is call for a free bin. o The new Spartanburg County Air Quality Committee met on October 26, 2006. Department o Health and Environmental Control employees were present and have since been given a request for 10 actions/activities that are 'reasonable' for Spartanburg to pursue and will clearly demonstrate a meaningful effort to improve air quality.					
universities, industries, energy companies, federal	Establish programs to research energy efficiencies at local universities, e.g., Institute for Energy Studies at Clemson University. Encourage business and industry to utilize the research from these programs to make the best decision concerning the purchase orupgrade of furnaces and boilers.	• Members of the Air Quality Staff Advisory Committee met with staff from the SC Institute for Energy Studies (SCIES) from Clemson University in late summer 2003. As a result, researchers from SCIES made a presentation to the Committee on November 18, 2003. The South Carolina Institute for Energy Studies (SCIES) based at Clemson University is a state-chartered research and development organization established in 1981. Its objectives are to promote energy research and development in and for the state; to transfer energy technology developed by others to South Carolina applications; to contribute to national energy issues in areas of excellence; and to promote statewide energy-education activities; (Source: http://www.clemson.edu/scies/AboutSCIES.htm). Researchers from SCIES became members of the Air Quality Staff Advisory Committee mailing list to transfer knowledge and latest undertakings on these efforts. - Alternative fuels: Clemson University chemical engineering professor Mark C. Thies has received an \$856,000 award from the Department of Energy (DOE) to develop more efficient processes for the or - Clemson University is developing the International		directionally sound	directionally sound	N/A	

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19. Use of alternate fuels.	Direct local Planning Commissions to identify areas where alternative fuels will be best suited. Encourage the use of alternate fuels; Assist with establishing alternative fuel infrastructure for private sector clean fuel fleets. Fuels other than gasoline and diesel that are used to pwoer on-road vehicles. Examples of alternate fuels include bio-diesel, electricity, ethanol, hydrogen, liquefied petroleum gas, methanol, and natural gas. Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles.	Alternate Fuel: Clemson University Professor James G. Goodwin, Jr., chair of the Clemson's d chemical and bimolecular engineering department, has also received a DOE grant for energy research through DOE's State Technologies Advancement Collaborative. Goodwin's work focuses on the performance of iron-based bimetallic catalysts that are crucial to synthesis of clean fuels, additives and lubricants derived from coal and biomass gasification. Clemson will lead a partnership that includes Louisiana State University, the S.C. State Energy Office, North Carolina's Research Triangle Institute, Rentech and Sud-Chemie Inc. This grant reflects \$875.499 in DOE-STAC funds and \$294,499 in cost sharing by the industrial and governmental participants. Sparfanburg County will begin purchasing alternative fuel vehicles for its fleet as older vehicles are replaced. There are currently 10 stations that offer Ethanol 85% and 6 stations that offer biodiesel within 25 miles of downtown Spartanburg. Stations can be located using the U.S. Department of Energy Alternative fuel vehicles.		directionally sound	directionally sound	N/A	
Evaluate the use of High Occupancy Vehicle (HOV) lanes using existing lanes.	Evaluate use of HOV on three (3) Iane interstate highways; Show the advantages of designating HOVs; Pass laws establishing regulations on HOVs lanes such as the threshold in the number of passengers (perhaps two) it the vehicle using HOVs lanes and time of day for the lane to be designated as HOV (fush hour). Pass laws authorizing issuance of tickets for violations of HOVs lanes regulations, i.e., one-passenger vehicles using HOV lanes on designated hours.	concluded that "HOV lanes work best where an		directionally sound	directionally sound	N/A	No further action planned
21. Modify speed limits for optimum fuel efficiency.	Direct SCDHEC and SCDOT to take the lead role. Direct Planning Commissions to assist SCDHEC in modeling.	The SPATS MPO was designated as urban by the US Census following the 2000 census and as a result speed limits on the interstate highways in Spartanburg County have been established at 60 mph.	Completed in 2005.	N/A	N/A	N/A	No further action planned
22. Develop process for evaluating and minimizing impact of major projects such as shopping centers, schools, and subdivisions.		Traffic impacts are monitored, both during and post construction, but process is not formalized.	Completed in 2005 and continuing.	N/A	N/A	N/A	See Comment #5
23. Community Schools to reduce vehicle miles travelled and encourage bilking and walkling for students and parents by encouraging smaller community-based schools that are integrated into neighborhoods	Eliminate minimum acreage requirements for school sites. Cap student populations per facilities. Require coordination among school boards and local governments to plan school sites and avoid conflicts with local planning goals. Favor restoration and construction of community-based small schools over new consturction of remote mega schools.	The South Carolina School District Reorganization and Realignment Act of 2006 was introduced in the House on January 24, 2006 and is currently residing in the House Committee on Education and Public works. This bill states that the Education and Oversight Committee shall study and examine the optimum size, including both geographic area and student population. A copy of this bill is available online at http://www.scstatehouse.net/sess116_200: 2006/bills/4488.htm Spartanburg County is awaiting the committee's recommendations and the manner in which they may take effect if this bill is enacted.	continuing.	N/A	N/A	N/A	• SECTION 203 SCHOOL SITES 203.1 South Carolina Code Ann. § 59-23-250 (to be codified at Supp. 2003) eliminates minimum acreage requirements for public school sites. However, school districts must receive approval from the South Carolina Department of Education prior to property acquisition or additions on existing properties. 203.2 The State Department of Education encourages districts to consider acreage for school sites as established by the Council of Educational Facility Planners International (CEFPI). See Comment #5

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Comment

1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documented as a part of the ongoing reporting requirements.

- 2. December 2003 Progress Report See http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html additional information provided by the county to include "findings", "advantages' disadvantages", "recommendations", "costs", etc....
- 3. March 2004 Local Early Action Plan See http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp
- 4. June 2004 Progress Report See http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp
- 5. December 2004 Progress Report See http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp
- 6. December 2004 SC EAC SIP Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See http://www.scdhec.gov/eqc/baq/html/eap_sip.html
- 7. April 20, 2005 Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. See http://www.scdhec.gov/eqc/baq/html/eap_sip.html
- 8. June 2005 Progress Report See http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

December 2006 - Early Action Compact Progress Report Spartanburg County

In an effort to keep your contact information updated we have provided the following information for our county:

	Name	Telephone	E-mail Address
Administrator/Manager	Glenn Breed	(864) 596-2526	gbreed@spartanburgcounty.org
EAC contact	Jim D'Amato	(864) 596-2460	jdamato@spartanburgcounty.org

The following measures were not included in the South Carolina Early Action Compact SIP but are directionally sound and are anticipated to assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.

Anderson, Greenville, and Spartanburg Resolution

Anderson County, Greenville County, and Spartanburg County each entered into a resolution as a cooperative means of improving air quality to meet applicable state and federal air quality standards. By entering into this resolution, the Counties agreed to the following:

- 1. Each County will provide individuals to serve on a Steering Committee. The Steering Committee will strive to finalize an Upstate Air Quality Action Plan. The Air Quality Action Plan is intended to be a guide for implementation of proactive measures that will bring the Participating Counties into compliance with the 8-hour ozone standard consistent with DHEC's Early Action Plan. The Steering Committee will consist of no more than 21 voting members (7 from each county). Advisory (non-voting) members may be appointed up to a maximum of seven from each county.
- 2. Implementation costs of the air Quality Action Plan will be specified and quantified by the Steering Committee including ongoing direct and indirect costs that will be incurred by state and local governments, businesses, and individual taxpayers.
- 3. The Steering Committee will prepare a report detailing and quantifying the economic impact and costs associated with non-attainment status that have been incurred by the four geographic non-attainment areas most closely located near Anderson, Greenville and Spartanburg.
- 4. Once an Air Quality Action Plan is developed by the Steering Committee, each of the Participating Counties will consider adoption of the Air Quality Action Plan within the boundaries of the respective participating Counties consistent with the goals of the Early Action Program.

Air Quality Awareness and Improvement Policy

Memorandum has recently been sent to all County department heads as well as elected and appointed officials for the purpose of establishing certain principles that will guide the recurring activities of County government.

Effective immediately, the county will:

1. Encourage that all county employees are notified of upcoming Ozone Action Days.

- 2. Encourage car-pooling opportunities.
- 3. Ensure that all County vehicles and equipment are operating according to the manufacturer's specifications.
- 4. Restrict vehicle idling to no more than 5 minutes. Exceptions include emergency vehicles, traffic/weather conditions, and vehicles being repaired, maintained, or inspected.
- 5. Restrict mowing and use of gas powered lawn equipment on County property on Ozone Action Days.
- 6. Restrict all outdoor burning on Ozone Action Days.
- 7. Energy conservation in all County facilities.
- 8. Include environmental considerations in purchasing decisions for goods and services. An example of such would be to purchase Energy Star equipment.

Based on stakeholder consultation and taking into consideration resource and political constrains, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.

ATTACHMENT 1

To South Carolina Department of Health and Environmental Control

Environmental Protection Administration

From: Spartanburg County, South Carolina

Date December, 2006

Reference: Summary of progress in implementing air quality strategies adopted by Spartanburg County and included in our Early Action Compact.

1. Support SCDHEC statewide efforts to reduce ozone levels.

Priority A

Description of Measure

- Stakeholder group to support and participate in modeling efforts.
- Develop stakeholder group to participate in development of regulations (NOx BACT (Best Available Control Technology Economically Achievable), restrict open burning).
- Members of the Upstate Air Quality Staff Advisory Committee participated with DHEC in the
 development of new regulations aimed at reducing NOx emissions. As a result, new
 regulations requiring NOx- BACT (Best Available Control Technology Economically
 Achievable) were adopted in mid 2004.

December 2004:

EAC SIP did include Appendix 16 -

- SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year reductions expected during the ozone season for residential construction waste. Emissions reduction: VOC: 43.01 tons/season; NOx: 9.06 tons/season; PM 38.48 tons/yr
- SC61-62.5, Std. 5.2 "Control of Oxides of Nitrogen) reduction amount for both existing and new sources combined across Anderson, Greenville, Spartanburg for 2007 calendar year. Emissions reduction of NOx: 234.1 tons/yr.
- June 24, 2004 Participated in Upstate Air Quality Steering Committee meeting held at BMW.
- November 2004 Upstate Air Quality Staff Advisory committee will be developing a business
 partnership plan to involve local industries in announcing ozone alerts, participating in ride
 share programs and adopting the same or similar list of initiatives that Greenville County
 adopted from the SELC.

June 2006:

 Spartanburg County distributed DHEC supplied material informing residents of air quality problems, and acquainting them with possible solutions presently being discussed by DHEC and by the Upstate Air Quality Committee.

Estimate of Emission Reductions (if available)

Equivalent to removing 359,500 cars from the road or 7190 tons of VOC.

Implementation Date

Completed June 25, 2004.

2. Designate an Ozone Action Coordinator

Priority A

Description of Measure

 Spartanburg County Council appointed one Ozone Action Coordinator in March of 2003: Jim D'Amato. Jim D'Amato continues to serve as the Ozone Action Coordinator.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed March 2003 and continuing.

3. Seek low sulfur fuels as early as possible.

Priority A

Description of Measure

The Committee has continued to coordinate with representatives of Colonial and Plantation pipelines, refiners. Based upon an unofficial status report from Kay Clamp width the SC Petroleum Institute ". We are fortunate in the Southeast because we receive much of our supply from the Gulf Coast, and 60% of the nation's refineries are in that area. A simple translation of that fact is that we are not dependant on one or two refineries for our fuel, and reap the benefits of a large number of refineries producing lower sulfur fuels.

December 2004:

- The maximum allowable sulfur level in gasoline for 2004 is 350 ppm with a corporate average of 120 ppm. Plantation Pipeline tests product entering their pipeline from every refinery, every day...their average from this testing has been and is 150 ppm in gasoline. Colonial Pipeline is also testing product from its shippers; the average sulfur levels for gasoline batches entering their pipeline YTD 2004 are 145 ppm for fungible regular gasoline and 62 ppm for fungible premium. Colonial did note that these averages are not volume weighted; they did not, however, think there would much difference if it were volume weighted. They also assumed that the regular and premium are averaged together for compliance.
- Both of the pipelines had the lower sulfur fuel in their facilities by late 2003; the fuel was at terminals serving S.C. by Jan. 2004, and was "on the street" by March 1, 2004".
- Continue to coordinate with representatives of colonial and Plantation pipelines, refiners, and State representatives to ensure that the upstate has the opportunity to receive low sulfur fuels at the earliest date as they can be provided.

December 2005:

• Committee continues to coordinate with representatives of Colonial and Plantation pipelines, refiners. During 2005, Colonial Pipeline conducted studies that indicates that S.C., as well as others along the Colonial Pipeline are receiving sulfur levels that should help many of the non-attainment areas. Specifically: M and V are the grades used in South Carolina. The sulfur content averages shown below are by batch not volumetric weighted values. M Grades: Average 139, High 330. V Grades: Average 74, High 300.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2004 and continuing.

Additional Information

 The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Ultra-low sulfur diesel fuel will be available at retail stations beginning summer 2006.

Design and implement congestion management and Intelligent Transportation System (ITS) measures. Priority A

Description of Measure

- Implement congestion management projects: intersection and signalization improvements to alleviate traffic congestion, therefore, reducing emissions from idling vehicles;
- Implement Intelligent Traffic Systems such as automated advisory/alert messages to drivers on interstate highways. For example: advise motorist about an accident ahead and the use of alternate routes to avid congestion, which minimize emissions from idle vehicles.
- Encourage and support improved traffic operational planning, engineering and maintenance for existing and future transportation infrastructure.

June 2005:

Cameras and variable message boards have been installed on I-26 in Spartanburg County,
 I-385 in Greenville County, and along I-85 through Anderson, Greenville and Spartanburg counties.

June 2006:

- Spartanburg County is working to implement the design for a complete and coordinated signal system within the City of Spartanburg and its immediate urban environs. This includes utilizing new fiber optic cables, new signal heads, and a new computer system controlled by the city. The cost of this effort is over \$5 million, and when complete will fully coordinate approximately 100 signals. Once this effort is complete, traffic flow within the urban area of Spartanburg County will be much improved, and congestion leading to ozone emissions will, hopefully, be reduced.
- The SCDOT is currently doing preliminary engineering on a SPATS-funded project to coordinate traffic signals along the busy SC 9 corridor in Boiling Springs. The design of the system is currently funded in the amount of \$110,000 by the SPATS MPO, and when construction is complete, signals along SC 9 will be completely coordinated and integrated along the urban region of the corridor to its tie-in with the city system outline above. As SC 9 is the number one transportation priority and congested road in Spartanburg County, the signalization system will both improve traffic flow, and reduce emissions.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Initiated in 2005 and continuing.

5. Use of hybrid vehicles.

Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet.
- Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel).
- Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract.

June 2005:

- There are approximately 70 alternative fuel vehicles operating within federal, state, county and municipal government. Of that amount 16 belong to the county. As directed by the County Administrator all future purchases will be either Hybrids or Alternative Fuel Vehicles, if practicable
- Spartanburg County is currently performing a cost-benefit analysis for the purpose of ascertaining whether new vehicle purchases should include hybrids. The county has already begun to implement a program to purchase flexible fuel vehicles for its fleet.

June 2006:

On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. The ratified title
is AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING
SECTION 12-6-3377 SO AS TO ALLOW A STATE INCOME TAX CREDIT EQUAL TO
TWENTY PERCENT OF CERTAIN NEW HYBRID, FUEL CELL, ALTERNATIVE FUEL, OR
LEAN BURN TECHNOLOGY MOTOR VEHICLE CREDITS ALLOWED AGAINST A
TAXPAYER'S FEDERAL INCOME TAX LIABILITY.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005 and continuing.

6. Use higher efficiency engines for school buses.

Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Require purchase of high efficiency engines for school buses as they are replaced. In South Carolina, the SC Department of Education is in charge of maintenance of school buses.
 DHEC is working with SC Department of Education to obtain grants from EPA.
- Promote an Adopt-A-School-Bus Program.
- Endorse a statewide recommendation for the State to take the lead.

December 2005:

- School Bus Retrofit Project: approximately 20 diesel buses will be retrofitted particulate
 filters during 2006. (additional reductions of PM are also expected) The school buses may
 not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available since the
 retrofitting technology being applied works best with this new fuel type.
- The South Carolina Department of Education purchased 61 new buses that should be on the road in late 2005.

June 2006:

- The Department of Education has been awarded a Clean School Bus USA Grant for \$499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idlereduction device pilot.
- State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly \$36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles.
- The buses from these funding sources will be distributed throughout the state. The South Carolina Department of Education (SDE) has agreed to make York County and the five deferred areas the top priority in assigning new and retrofitted buses to service. SDE is also partnering with private companies and local school districts to provide specific funding for school bus retrofits and clean air programs.

Estimate of Emission Reductions (if available)

VOC 340 lbs/year.
CO reductions 2,380 lbs/year
Additional reductions of PM are also expected.
December 2004 EAC SIP - Appendix 16

Implementation Date

Completed in 2006 and continuing.

7a.Develop incentive programs and opportunity for citizens to choose alternative transportation modes.

Establish intermodal connections with an emphasis on mass transit.

Priority A

Description of Measure

WALKING/BIKING:

- Encourage local government to increase pedestrian/bicycle infrastructure spending (the Upstate spends 2¢ per person compared to SC spending 22¢ per person).
- Establish safer bike routes with better signs marking lanes and routes.
- Increase highway funding for bike paths, walking or mass transit including high-speed rail. Support the federal transportation enhancement program.
- Install bike racks on all transit vehicles to encourage intermodal transportation. New buses purchased through the state's bus purchase program will have bike racks.

PARK and RIDE:

• Establish mass transportation between a plant and a park-and-ride site.

CARPOOLING:

• Work with local government to offer incentives for employees to car pool.

MASS TRANSIT:

- Offer a free trolley service running in a loop in downtown areas and nearby restaurants, especially during lunch hours;
- Research past feasibility studies on free downtown shuttles. Potential for sponsorship with local area restaurants and businesses for a lunch time shuttle - could defer the operational costs of the endeavor.
- Support mass transit (transportation choices and alternatives): While the only local mass
 transit choice that is currently available in some areas is the transit bus, example of future
 options such as bus rapid transit, commuter passenger service offered by trains on existing
 rail systems, a diesel multiple unit or "light rail" should be supported.

December 2004:

 In 2003 the SPATS Policy Committee began including alternative mobility projects in its transportation projects. To encourage walking and biking, all Spartanburg Area Transportation Study (SPATS) projects will, where possible, have dedicated bike lanes and sidewalks offset from the curb by a grass buffer. This will allow pedestrians to feel safer and will better encourage walking.

December 2005:

- The SPATS (Spartanburg Area Transportation Study) Metropolitan Planning Organization (MPO) is one of thirteen areas across the nation selected by the National Center for Bicycling and Walking (NCBW) for the 2004-2005 "Walkable Community Workshops" program.
- This shared-cost workshop project, pledging staff and financial resources in exchange for technical assistance and training from NCBW, featured workshops in eight different areas* of the SPATS MPO during the week of May 23-27, 2005. Workshops were held in the city of Spartanburg, Boiling Springs, Pacolet, Duncan, Cowpens, Chesnee, and on the Spartanburg eastside. Approximately 170 people participated. SPATS staff continues to be active in ongoing educational efforts aimed at encouraging alternate modes of travel.

June 2006:

- Nine "Walkable Community" workshops were held in Spartanburg County during the week of May 23-26, 2005. They identified bicycle and pedestrian facility projects (i.e. crosswalks), developed pedestrian and cyclist-friendly policies for their local government (i.e. mixed use development allowed), and chose creative programs to bring awareness to others in the benefits of walking and biking (i.e. bike to shop incentive program). These plans will continue to be an ongoing program of action to change the walking environment in the Spartanburg community, with critical buy-in from local city officials. Information on the workshops can be found at http://www.spartanburgcounty.org/govt/depts/pln/spats/wcw.htm
- The Hub City Connector is a 12-mile path of greenways, bicycle lanes and safe, signed sidewalks through the heart of Spartanburg. Visit http://hubcityconnector.org/ and click on the maps link to see portions of the trail currently open and others that are under construction. Upon completion, it will connect schools with neighborhoods, customers with shops and seniors with health clubs. As our local passage of the Palmetto Trail, the state's Mountains to the Sea Trail, it serves as the spine for Spartanburg's growing network of parks, trails and bike lanes.
- The Mary Black Foundation has given \$700,000 for a soon-to-be-completed two-mile section of the Palmetto trail. The section is part of the Hub City Connector, a 12-mile piece of the Palmetto Trail, which could end up becoming the backbone of the area's trail system.
- A Bicycle/Pedestrian Planning Strategies workshop was offered by SPATS via teleconference on May 4, 2006. More information is available at http://www.spartanburgcounty.org/govt/depts/pln/spats/docs/BicycleAndPedestrianTraining.pdf

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005 and continuing.

Measure under Consideration

7b. Offer free or reduced transportation cost on high ozone days. Priority A

Work with SPARTA to implement a reduced cost structure for high ozone days.

Description of Measure (A more detailed description will be included in the Early Action Plan.)

Implement a coordinated high ozone day alert action plan to include public notification and free or reduced ozone fares from the transportation providers.

June 2005:

A staff person from the South Carolina Department of Transportation (SCDOT) has been designated to receive SCDHEC's Ground-level Ozone Forecast and to distribute it via email to approximately 5,000 staff. SCDOT also plans to utilize the SCDHEC Ozone Forecast Internet link for the forecast on their webpage. SCDOT roadside emergency signs in the Upstate and Midlands will be utilized for Ground-level Ozone Action Alerts. Spartanburg has 7 variable message signs along its interstate system.

June 2006:

The SPARTA website includes information on Commuter Choice, a nationwide partnership
designed to help employers create customized solutions to their employees' commuting
challenges. Commuter Choice can also include communities working with residents, schools
working with students, and even developers working with future tenants to provide and
promote choices for travelers. http://www.spartabus.com/Commuter%20Choice.htm.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Implementation began in 2005 and is continuing. Completion of this measure dependent upon SPARTA financial status.

Measure under Consideration

7c. Reduce vehicle miles traveled by developing efficient user-friendly transit systems. Priority A

- Integrate transportation planning with land use planning so public transit can make a comprehensive contribution to economic development and mobility;
- Remove local barriers to densification in downtowns, infill areas, and transit stations and corridors.

Description of Measure (A more detailed description will be included in the Early Action Plan.)

December 2005:

 An executive summary of the Intermodal Element addendum of the 2005-2025 Long-Range Transportation Plan is available at http://www.spartanburgcounty.org/govt/depts/pln/spats/docs/excsum.pdf. The Plan includes a Bicycle and Pedestrian Plan as well as an Alternate Mobility Master Plan.

June 2006:

 Spartanburg County has no zoning regulations in its non-incorporated areas, so influencing land use decisions is relatively difficult. However, the city of Spartanburg is actively attempting to increase residential development downtown, which would lead to less incoming traffic during the work week. In addition, the Spartanburg County Planning Commission staff is examining its subdivision regulations for the purpose of facilitating easier cross access between neighboring subdivisions.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Implementation began in 2005 and is continuing. Completion of this task dependent upon elected officials' willingness to incorporate more rigid land use regulations.

8. Review and update air emission inventory for the Upstate.

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Ensure all industrial sources still operating. Review industrial sources for plant closures.
- Identify major sources of NOx
- Map the locations of point sources (10% of point sources cannot be found).
- Map the specific locations and the area sources where coal is burned.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed. This information was included in the December 10, 2003 Early Action Compact Milestone on pages 20 through 37.

9. Support SCDHEC in evaluating and seeking reductions from major sources based on modeling. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Support NOx reduction strategies in the State Implementation Plan.
- Develop an Early Reduction Program with incentives for industrial facility (Tier Two Type emission NOx sources). This was completed and forwarded to SCDHEC on a previous updated progress report. The information allowed DHEC to having more accurate emissions inventory.
- Coordinate with Duke Power to determine what NOx reductions are planned for the Lee Steam Plant.

June 2004:

- The Williams Company has received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors will begin in late 2004 and continue until late 2005. This will result in a significant NOx reduction for the upstate.
- Transcontinental Gas Pipe Line Corporation (Ttransco) Station 140, Moore, SC; Operating Permit 2060-0179. Transco has 14 natural gas fired internal combustion (IC) engines that collectively accounted for 3,822 tons of ozone season NOx emissions during 1997. Transco has submitted a construction permit application to put on NOx controls that will result only 1,261 tons of ozone season NOx emissions. The permit was approved on April 27, 2004.

December 2004:

 The Williams Company received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors began in late 2004 and continue until late 2005. This will result in a significant NOx reduction for the Upstate.

June 2006:

NOx reduction at the Duke Power Lee Steam Plant

- Coal fired Unit #2 is now operating with the new NOx burners and final manufacture set up for acceptance is to be conducted in June 2006. Monitoring data indicates that the burner should at least meet the 0.23 #NOx/MMBTU's. Unit #2 will operate this entire NOx season with the Low NOx burners.
- Coal fired Unit #1 is currently off line. It will be coming back on line in July 2006 with new NOx burners installed. If the results are similar to Unit #2 Duke Power will also operate this unit the entire NOx season at the 0.23 #NOx/MMBTU's rate or lower. This unit will operate approximately 4-6 weeks and final set up will be conducted.
- Both units will complete final construction permit testing during June, July and August 2006.
 Duke Power has commitment to install the Low NOx burners on the 2 remaining coal fired
 units at the Lee Steam Plant. Unit #1 burners were installed April-May 2006 and start-up
 with Low NOx burners was May 19, 2006. Unit #2 burners were installed March-April 06
 and start-up with Low NOx burners was April 15, 2006.

Estimate of Emission Reductions (if available)

- 2,000-4,000 tpy NOx from SIP Call
- Potential 500-1000 tpy NOx (Tier Two)

Implementation Date Implementation began in 2004 and was completed in 2006.

10. Develop a program to offer to purchase or repair smoking vehicles (known as cash for clunkers). Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Use funds generated from a license plate sales, registration fees, or license plate tax program to buy or repair high emitting vehicles from individuals.
- Purchase such vehicles from non-profit groups such as the Kidney Foundation, Goodwill, and Salvation Army when they have been donated as charitable gifts.
- Consider accelerated vehicle retirement (scrappage) programs to encourage vehicle owners to voluntarily retire their vehicles sooner than they would have otherwise.

2004 and 2005: no local action has taken place on this strategy.

June 2006: staff from the Air Quality Staff Advisory Committee will meet with Goodwill Industries, Salvation Army and Kidney Foundation representatives to discuss alternatives to reselling clunker vehicles donated to these organizations.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2006. No action taken due to budget constraints.

11. Ban open burning of on-site commercial clearing debris during ozone season (April to October). Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Use SCDHEC model to determine the most effective method to ban open burning.
- Discuss modeling results with all local governments to consider adoption.
- DHEC adopted regulations in mid 2004 restricting open burning.

December 2005:

 At the November 2005 Air Quality Steering Committee meeting, the Committee directed staff to coordinate with local governments to enforce DHEC's burning ban year-round.

June 2006:

- Spartanburg County will notify all fire departments, all municipal and county codes departments, the Spartanburg Home Builders Association and others about the ban.
- DHEC encourages Anderson, Greenville, and Spartanburg to actively notify all residents that the statewide ban is now in force and violations are punishable by law.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed on June 25, 2004 with the passage of regulation SC 61-62.2 "Prohibition of Open Burning" and continuing.

12. Create incentives for the purchase of high efficiency and low emissions vehicles. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Offer tax credits for vehicles with high efficiency gas consumption or low emissions.
- Offer tax credits for low mileage vehicles instead of high mileage vehicles

December 2004:

 Developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles.

December 2005:

• A bill titled "An act concerning the promotion of alternative use fuel, and hybrid propulsion system for transportation purposes" was submitted to the SC House of Representatives in January 2005. The bill is now in committee. In summary, the bill provides tax Credit for vehicles using alternative fuel or hybrid propulsion vehicles. The credit is allowed against the tax imposed by for the purchase of vehicles licensed in South Carolina which use, or which are converted within 120 days of purchase to use, clean-burning fuel. Specifically the intent of the bill will apply for income tax years beginning on or after January 1, 2004, but prior to January 1, 2013. The tax credit will be allowed for the purchase of an alternative fuel or hybrid propulsion vehicle, and for a motor vehicle that is converted to use alternative fuel, for the replacement of the power source with a power source that uses alternative fuel.

June 2006:

On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. The ratified title
is AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING
SECTION 12-6-3377 SO AS TO ALLOW A STATE INCOME TAX CREDIT EQUAL TO
TWENTY PERCENT OF CERTAIN NEW HYBRID, FUEL CELL, ALTERNATIVE FUEL, OR
LEAN BURN TECHNOLOGY MOTOR VEHICLE CREDITS ALLOWED AGAINST A
TAXPAYER'S FEDERAL INCOME TAX LIABILITY.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Implementation began in 2005 and was completed June 1, 2006.

13. Use land-use and transportation planning to improve air quality.

Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

Include air quality measures as a part of the land-use and transportation planning process.

June 2005:

Spartanburg County's land use efforts include strategies that are represented in the county's comprehensive plan or unified land management ordinance. Some important strategies include:

- Development of a comprehensive urban forestry plan to include local tree ordinances, protection policies of urban open spaces, and landscape ordinances that utilize native plants.
- Revisions of the county's subdivision regulations to include conservation provisions to help not only retain natural resources, but add to the value and marketability of rural residential projects. This will also maintain balance between the rural setting and future growth and development.
- Amending the county's subdivision regulations to promote cluster housing development in rural areas, thereby minimizing land coverage for residential use. Establishing maximum lot size (recommended ¼ acre) for cluster subdivisions of a certain size, as opposed to minimum lot size, and allocating in perpetuity through lease, trust, common ownership, etc. up to 80 percent of such subdivisions to open, agricultural, or forested use, thus retaining rural, open character.

December 2005:

 An executive summary of the Intermodal Element addendum of the 2005-2025 Long-Range Transportation Plan is available at http://www.spartanburgcounty.org/govt/depts/pln/spats/docs/excsum.pdf. The Plan includes a Bicycle and Pedestrian Plan as well as an Alternate Mobility Master Plan.

June 2006:

• Spartanburg County has no zoning regulations in its non-incorporated areas, so influencing land use decisions is relatively difficult. However, the city of Spartanburg is actively attempting to increase residential development downtown, which would lead to less incoming traffic during the work week. In addition, the Spartanburg County Planning Commission staff is examining its subdivision regulations for the purpose of facilitating easier cross access between neighboring subdivisions. In addition, developers are beginning to see the interest in neo-traditional development, and some new developments are being built that incorporate several of these features.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005.

14. Implement a program to encourage use of green power.

Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Capture emissions from landfills to produce green power, e.g., BMW is utilizing Palmetto Landfill emissions to produce energy for its plant.
- No local action has taken place on this strategy Implement a Purchase Green Power program when available. Green power is electricity generated by renewable resources like solar, wind, and even decomposing garbage in selected landfills. These resources are replenished naturally and minimize harm to the environment.

2003:

 BMW Manufacturing Corp. and its partners launched a \$12 million methane gas-to-energy project. Methane from the Palmetto Landfill will be used to power four onsite turbines and cogenerate electricity and hot water for the manufacturing plant in Spartanburg.

December 2005:

• In 2005, Blue Ridge Electric Cooperative in Anderson County has begun offering the purchase of "Green Power" to its members. The Green Power is generated by Santee Cooper, who is the source of power for all of the electric cooperatives in South Carolina.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005 and continuing.

15. Promote route efficiency for delivery vehicles, trash collection etc.

Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Encourage business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets.
- Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage.

June 2006:

• Delivery companies currently use GPS mapping programs to map the most cost effective route to save gasoline.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed. No action taken by local government. Private sector fleets already maximizing fleet movement.

16. Establish a clean air partnership with business and industry.

Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Encourage and coordinate alternate work schedules such as staggered work hours for business, industry and local governments.
- Establish park and ride lots serving perimeter counties along major corridors.
- Make the public aware of the park-and-ride concept: media could assist in publicizing which programs are available.
- Encourage carpooling/vanpooling as an option where employees living in the same area agree to ride to work together rather than to drive their individual vehicles to work.
- Consider parking facility controls that can include employers offering a tax-free transit/vanpool benefits and which limit the amount of parking and encourage carpooling, mass transit, etc.
- Encourage telecommuting.
- Adopt a Bus Program.
- Develop funding to be used for matching grants fund for several EAP Strategies.

June 2004:

 Staffs of Greenville County Planning Commission, Greenville Transit Authority and Greater Greenville Chamber of Commerce have begun joining effort to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and Spartanburg counties.

December 2005:

• In November 2005, the Air Quality Steering Committee directed staff to begin addressing this strategy before the 2006 ozone season.

Estimate of Emission Reductions (if available)

Significant in the area of grants and local non- local tax funds generation. Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2004 and continuing.

17. Establish an active public awareness campaign. A

Priority

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Develop an editorial board to discuss air quality issues and development of a relationship with media.
- Use alert messages year round, not only during ozone season; Utilize public service announcement, newspapers, weather channels, and other media outlets to notify citizens of high ozone days.
- Utilize TV Channels to issue high ozone alerts using the crawl bar at bottom of TV screens.
- Encourage health organizations to sponsor ozone alerts in media.
- Enhance ozone awareness (Outreach-communication): assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.).
- Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawnmowers during evenings instead of during high ozone hours, using of electric lawn mowers.
- Develop a license plate program to generate revenue to implement the public awareness campaign.
- Develop awareness program on tax savings for purchasing high efficiency vehicles.

December 2004:

• Spartanburg County requested an Air Public Service announcement from SCDHEC.

June 2005:

 Berry Shoals Elementary School in Spartanburg County requested educational materials and held special science awards in March 2005.

June 2006:

- Distributed bookmarks to public at Spartanburg County libraries, and disseminated DHECsupplied material in information kiosk in main Spartanburg County Administration Building.
- Spartanburg County plans to add \$30,000 to fund an Air Quality Coordination Effort (AQCE) in the Public Works Department. This proposal supports the County's efforts to cooperatively work with the State DHEC in the conservation and enhancement of air resources in a manner that promotes quality of life. Funding for the AQCE will permit the County to fully participate in particulate matter compliance efforts including the Early Action Ozone Compliance Compact. This project will be supported with fund balance for FY07, and supported as part of the operating budget in future years.

December 2006:

 Spartanburg received a \$47,650 grant from the state Department of Health and Environmental Control to promote its recycling program. The campaign will use newspaper, radio, internet, cable television, and outdoor advertising to promote recycling. Promotions will point out that all city residents have to do to participate is call for a free bin. The new Spartanburg County Air Quality Committee met on October 26, 2006. Department
of Health and Environmental Control employees were present and have since been given a
request for 10 actions/activities that are 'reasonable' for Spartanburg to pursue and will
clearly demonstrate a meaningful effort to improve air quality.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2004 and ongoing.

18. Promote research in energy efficiency at local universities, industries, energy companies, federal government, and other institutions that improve air quality.

Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

Establish programs to research energy efficiencies at local universities, e.g., Institute for Energy Studies at Clemson University.

Encourage business and industry to utilize the research from these programs to make the best decision concerning the purchase or upgrade of furnaces and boilers.

June 2004:

Members of the Air Quality Staff Advisory Committee met with staff from the SC Institute for Energy Studies (SCIES) from Clemson University in late summer 2003. As a result, researchers from SCIES made a presentation to the Committee on November 18, 2003. The South Carolina Institute for Energy Studies (SCIES) based at Clemson University is a state-chartered research and development organization established in 1981. Its objectives are to promote energy research and development in and for the state; to transfer energy technology developed by others to South Carolina applications; to contribute to national energy issues in areas of excellence; and to promote statewide energy-education activities. (Source: http://www.clemson.edu/scies/AboutSCIES.htm). Researchers from SCIES became members of the Air Quality Staff Advisory Committee mailing list to transfer knowledge and latest undertakings on these efforts.

December 2005:

- Alternative flues: Clemson University chemical engineering professor Mark C. Thies has
 received an \$856,000 award from the Department of Energy (DOE) to develop more
 efficient processes for the centralized production of hydrogen by splitting water. The award
 was one of only three made nationwide under DOE's Nuclear Hydrogen initiative. In
 addition to Thies, the project team includes fellow Clemson David Bruce, John O'Connell
 from the University of Virginia and Max Gorensek from Savannah River National Lab. The
 Clemson team will interact not only with U. S. engineers and scientists but also with those in
 France, Italy, and Japan, all of whom have teams working on related processes.
- Clemson University is developing the International Center for Automotive Research (Clemson-ICAR) in Greenville, SC. The ICAR project will be the premier automotive and motorsports research and educational center in SC. Research will emphasize development of innovative materials and processing technologies, which will enable the development of more efficient, and environment friendly vehicles, as well as electrical power generators.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005.

19. Use of alternate fuels.

Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Direct local Planning Commissions to identify areas where alternative fuels will be best suited.
- Encourage the use of alternate fuels.
- Assist with establishing alternative fuel infrastructure for private sector clean fuel fleets.
 Fuels other than gasoline and diesel that are used to power on-road vehicles. Examples of
 alternate fuels include bio-diesel, electricity, ethanol, hydrogen, liquefied petroleum gas,
 methanol, and natural gas.
- Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles.

December 2005:

- Alternate Fuel: Clemson University Professor James G. Goodwin, Jr., chair of the Clemson's chemical and bimolecular engineering department, has also received a DOE grant for energy research through DOE's State Technologies Advancement Collaborative.
- Goodwin's work focuses on the performance of iron-based bimetallic catalysts that are crucial to synthesis of clean fuels, additives and lubricants derived from coal and biomass gasification.
- Clemson will lead a partnership that includes Louisiana State University, the S.C. State Energy Office, the Louisiana State Energy Office, North Carolina's Research Triangle Institute, Rentech and Sud-Chemie Inc. This grant reflects \$875,499 in DOE-STAC funds and \$294,499 in cost sharing by the industrial and governmental participants.

June 2006:

- Spartanburg County will begin purchasing alternative fuel vehicles for its fleet as older vehicles are replaced.
- There are currently 10 stations that offer Ethanol 85% and 6 stations that offer biodiesel within 25 miles of downtown Spartanburg. Stations can be located using the U.S. Department of Energy Alternative Fuels Data Center Website at http://www.eere.energy.gov/afdc/infrastructure/locator.html

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005 and continuing.

20. Evaluate the use of High Occupancy Vehicle (HOV) lanes using existing lanes. Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Evaluate use of HOV on three (3) lane interstate highways.
- Show the advantages of designating HOVs.
- Pass laws establishing regulations on HOVs lanes such as the threshold in the number of passengers (perhaps two) in the vehicle using HOVs lanes and time of day for the lane to be designated as HOV (rush hour).
- Pass laws authorizing issuance of tickets for violations of HOVs lanes regulations, i.e., one-passenger vehicles using HOV lanes on designated hours.

December 2003:

• During its August 5, 2003, the AQ Staff Advisory Committee discussed and evaluated the implementation of this strategy. The Committee concluded that "HOV lanes work best where an interstate or a limited access arterial lead directly to major employment centers, usually within a central business district (CBD). With the exception of I-385 leading to the Greenville CBD, Upstate interstates (especially I-85) generally link the cities of Anderson, Greenville, and Spartanburg via peripheral routes, not conducive to the addition of HOV lanes. In addition, inter-county work trends do not show major volumes that would support car-pooled trips. Making the third lane of I-85 an HOV lane would severely increase congestion, emissions, and future accidents. The addition of new lanes would be cost prohibitive, and would not be allowed to revert to a single occupancy vehicle (SOV) status without reimbursement to the federal government."

December 2004:

• In June 2004, Planning Commission staff met with traffic engineers from SCDOT to discuss this strategy. Traffic engineers indicated that because traffic volumes on I-85 exceed 100,000 vehicles daily on the three lanes of the interstate, it was recommended that the Upstate consider converting one of the three lanes on I-85 or I-385 to a HOV lane. The offsetting increase in congestion in the two remaining lanes would predictably increase NOx emissions by an amount exceeding the any reductions gained from traffic moving in the HOV lane. HOV lanes work best when they are paralleled by at least 4 or more free flow lanes. No further actions are planned.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2004.

21. Modify speed limits for optimum fuel efficiency.

Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Direct SCDHEC and SCDOT to take the lead role.
- Direct Planning Commissions to assist SCDHEC in modeling.
- Speed limits on the interstate highways in Spartanburg County have been established at 60 mph because the county is defined as urban by the US Census and the FHWA.

December 2005:

 The SPATS MPO was designated as urban by the US Census following the 2000 census and as a result speed limits on the interstate highways in Spartanburg have been established at 60 mph. According to the Department of Energy, gas mileage decreases rapidly at speeds above 60 mph.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005.

22. Develop process for evaluating and minimizing impact of major projects such as shopping centers, schools, and subdivisions.

Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Study impact of post construction traffic flow.
- Study impact of construction activities.

June 2006:

Traffic impacts are monitored, both during and post construction, but process is not formalized.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005 and continuing.

23. Community Schools to reduce vehicle miles traveled and encourage biking and walking for students and parents by encouraging smaller community-based schools that are integrated into neighborhoods.

Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Eliminate minimum acreage requirements for school sites.
- Cap student populations per facilities.
- Require coordination among school boards and local governments to plan school sites and avoid conflicts with local planning goals.
- Favor restoration and construction of community-based small schools over new construction of remote mega schools.

June 2006:

- The South Carolina School District Reorganization and Realignment Act of 2006 was introduced in the House on January 24, 2006 and is currently residing in the House Committee on Education and Public works. This bill states that the Education and Oversight Committee shall study and examine the optimum size, including both geographic area and student population. A copy of this bill is available online at http://www.scstatehouse.net/sess116 2005-2006/bills/4488.htm
- Spartanburg County is awaiting the committee's recommendations and the manner in which
 they may take effect if this bill is enacted.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2006 and continuing.

Additional Information

SECTION 203 SCHOOL SITES

203.1 South Carolina Code Ann. § 59-23-250 (to be codified at Supp. 2003) eliminates minimum acreage requirements for public school sites. However, school districts must receive approval from the South Carolina Department of Education prior to property acquisition or additions on existing properties.

203.2 The State Department of Education encourages districts to consider acreage for school sites as established by the Council of Educational Facility Planners International (CEFPI).